CLAIMS:

1. A fuel cell separator composition comprising an electrically conductive carbonaceous powder and a binder, the binder being a mixture of a thermoset resin with a polyoxazine compound having a plurality of oxazine rings.

2. The fuel cell separator composition of claim 1 which contains 5 to 200 parts by weight of the polyoxazine compound per 100 parts by weight of the thermoset resin.

3. The fuel cell separator composition of claim 1 which contains 100 to 6,000 parts by weight of the conductive carbonaceous powder per 100 parts by weight of the thermoset resin, the conductive carbonaceous powder having an average particle size of 10 nm to 500 μm.

4. The fuel cell separator composition of claim 1, further comprising up to 500 parts by weight of a fibrous base per 100 parts by weight of the thermoset resin.

5. A fuel cell separator made by imparting to the fuel cell separator composition of any one of claims 1 to 4 a separator shape having gas supplying and removing channels on one or both sides thereof, which separator, when a 3.5 g specimen is cut therefrom, placed in 305 ml of deionized water and heated at 90°C for 500 hours, imparts to the water an electrical conductivity of not more than 20 μS/cm.

6. The fuel cell separator of claim 5 which has a resistivity, as measured according to JIS H0602, of at most 50 mΩ·cm and a gas transmission rate, as measured by method B of JIS K7126, of at most 50 $ml/m^2 \cdot day \cdot atm$.

7. A method of manufacturing fuel cell separators, comprising the steps of:
preparing a fuel cell separator composition comprising an electrically conductive carbonaceous powder and a binder which is a mixture of a thermoset resin with a polyoxazine compound, and
shaping the composition into a fuel cell separator having gas supplying and removing channels on one or both sides thereof;
wherein the composition is prepared by the admixture of 100 parts by weight of the thermoset resin, 5 to 200 parts by weight of the polyoxazine compound, 100 to 6,000 parts by weight of the conductive carbonaceous powder, and 0 to 500 parts by weight of a fibrous base.

8. A solid polymer fuel cell comprising a plurality of stacked unit cells, each unit cell being comprised of a solid polymer electrolyte membrane, a pair of electrodes disposed on either side of the polymer electrolyte membrane, and a pair of separators disposed on either side of the pair of electrodes such as to form gas supplying and removing channels; wherein at least some of the separators within the fuel cell are fuel cell separators according to claim 5 or 6.

9. The solid polymer fuel cell of claim 8 which has an initial voltage V_1 and a voltage V_2 after 200 to 500 hours of continuous operation, such that $(V_2/V_1) \times 100$ is at least 80%.